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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,029	02/14/2002	Takashi Hasegawa	P/1071-1528	4961

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Keating & Eaton Place
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EXAMINER

JONES, STEPHEN E

ART UNIT PAPER NUMBER

2817

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,029

Applicant(s)

HASEGAWA, TAKASHI

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are. a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I (Figs. 1-7) in Paper No. 9/4/03 is acknowledged. Applicant indicated that claims 1-8 and 11-20 read on the elected species. However, upon examination it appears that Claim 11 more appropriately reads on a non-elected figure such as Fig. 9 which teaches the second casing sidewalls overlap inner surfaces of the first casing sidewalls (similar to non-elected claim 9). Also, Claim 12 is dependent on Claim 10 which is non-elected. Furthermore, Claim 19 appears to more appropriately read on a non-elected embodiment such as Fig. 9 which teaches the contact preventing portions are covering most of the inner surface of the first casing sidewall.
2. Accordingly, Claims 9-12 and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9/4/03.

Claim Objections

3. Claim 17 is objected to because of the following informalities: The term "SPCC" should be defined in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 17-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokudera et al. in view of Nakata et al.

Tokudera (Figs. 1-4) teaches a nonreciprocal device including: a permanent magnet (3); a ferrite (54) with a plurality of center electrodes (51-53); a magnetic yoke case having an upper and lower portion (2 and 8); the first casing member (2) is in contact with the magnet and has sidewalls that are opposing each other; the lower casing has sidewalls that oppose each other and also has a resin case (7) which also has sidewalls that oppose each other (Claims 2-3); a portion of the resin case is more thick than the upper casing member and has upper surfaces which extend above the bottom of the magnet (i.e. a contact preventing portion in the same manner as the present invention) (see Fig. 4) (Claims 5, 18); the lower casing sidewalls overlap the outer surface of the upper casing sidewalls (Claims 4, 8). Also, Claims 1 and 6 require that the lower casing have a thickness between 50% and 100% of a thickness of the first casing member, this limitation is anticipated by Tokudera since just under 100% is within design tolerance considerations. Also, regarding Claim 7, the product by process limitation of "insert-molded" is not given any patentable weight since only the final product is patentable in an apparatus claim (i.e. the resin case of Tokudera is inserted in the lower casing in the final product form and thus meets the claim limitation). Furthermore, Tokudera teaches that the device is used in mobile communication equipment, thus Claim 20 is anticipated since inherently mobile communication equipment requires a transmission or reception circuit to function.

However, Tokudera does not explicitly teach the specific magnetic yoke material or that the magnetic yoke is iron-based metal or SPCC (Claims 1, 6, 17).

Nakata teaches that SPCC (i.e. an iron-based/ steel material) can be used as a yoke magnetic flux inducing means (e.g. see Col. 6, lines 6-13).

It would have been considered obvious to one of ordinary skill in the art to have substituted SPCC such as suggested by Nakata in place of the generic magnetic yoke material in the Tokudera device, because it would have been considered a well-known art-recognized equivalent/alternative magnetic material for forming a yoke.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tokudera et al. and Nakata et al. as applied to claim 1 above, and further in view of Prevot et al.

The combination of Tokudera et al. and Nakata et al. teaches a nonreciprocal device as described above. However, Tokudera teaches that the casings are soldered together, but does not teach that they are welded together.

Prevot teaches an isolator having steel casing parts (i.e. a yoke) which are welded together.

It would have been considered obvious to one of ordinary skill in the art to have substituted welding such as taught by Prevot in place of soldering in the device of the combination of Tokudera and Nakata, because it would have been considered a well-known art-recognized alternative means of connecting the casing parts together of a yoke.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokudera et al. and Nakata et al. as applied to claim 1 above, and further in view of Yamamoto et al.

The combination of Tokudera et al. and Nakata et al. teaches a nonreciprocal device as described above. However, they do not teach plating the surfaces with nickel and silver.

Yamamoto teaches that it is typical to use both nickel and silver plating on a yoke (e.g. see Col. 1, lines 55-60).

It would have been considered obvious to one of ordinary skill in the art to have included nickel and silver plating of the yoke such as taught by Yamamoto in the device taught by the combination of Tokudera and Nakata, because it would have provided the advantageous benefit of excellent uniformity and thus an efficient construction, thereby suggesting the obviousness of such a modification.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tokudera et al. and Nakata et al. as applied to claim 1 above, and further in view of Matsch (Electromagnetic and Electromechanical Machines).

The combination of Tokudera et al. and Nakata et al. teaches a nonreciprocal device as described above. However, they do not explicitly teach that the magnetic flux is unsaturated in the second casing.

Matsch teaches that above saturation of a magnetic material the intrinsic flux density remains constant (i.e. there is little increase in flux at saturation).

Therefore, it would have been considered obvious to one of ordinary skill in the art to have the magnetic flux be unsaturated in the combination of Tokudera and Nakata, especially since above saturation there is little flux gain (as suggested by Matsch), thus there would be no advantage to be at saturation.

Conclusion

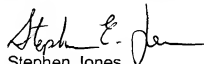
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jussaume et al. teaches a circulator having a lid and casing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ